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FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

17 AUG 1993

IN REPLY REFER TO:

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Honorable Harry Reid
United States Senate
324 Hart Senate Office Building
Washington, D.C. 20510

Dear Senator Reid:

This is in response to your letter of August 5, 1993, in which you inquired on behalf of your constituent, Mr. Frank E. Chase, regarding the Notice of Proposed Rule Making (Notice) in PR Docket No. 92-235, 57 FR 54034 (1992). Your constituent is specifically concerned about the potential impact of our final rules on radio remote controlled airplane hobbyists.

Model airplane users have shared spectrum on a secondary basis with industrial users for over 25 years. The low power industrial user and the radio control model airplane hobbyists effectively share spectrum through geographic separation. We are enclosing the Report and Order in GEN Docket 82-181, 47 FR 51875 (1982), which provided the current 50 channels for radio controlled model airplanes. These rules, adopted at the behest of the model airplane community, provide no protection from interference from licensed sources. We further note that the radio environment is inherently hazardous and that even primary allocations suffer from problems. For example, model aircraft users receive interference from other model aircraft users and from certain TV channels. Thus, model aircraft must be, and in fact are, capable of co-existing with some interference.

The Commission is seeking to work with all parties on this matter. To this end, FCC staff has met with the two largest industry groups representing model airplane users, the Academy of Model Aeronautics and the Sport Flyers Association, to discuss their concerns and methods of expanding capacity for private land mobile radio users without affecting radio control users. Thank you for your interest. Your letter will be included in the formal record of this proceeding.

Sincerely,

/s/

Doron Fertig
Economist
Private Radio Bureau

Enclosure

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HARRY REID
NEVADA

United States Senate
WASHINGTON, DC 20510-2803

PRB
92-235
5079

August 5, 1993

Mr. Doran Fertig
Federal Communications Commission
1919 M Street NW, #5202
Washington, D.C. 20554

Dear Mr. Fertig:

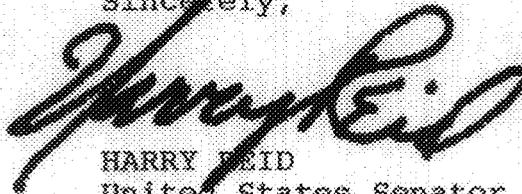
Enclosed is a letter I have received from Mr. Frank E. Chase regarding the Federal Communications Commission PR Docket No. 92-235.

I would appreciate your reviewing his comments and providing answers to my constituent's concerns. Please send your reply directly to my office to the attention of Maryam Moezzi.

Thank you for your cooperation and assistance.

With all best wishes,

Sincerely,



HARRY REID
United States Senator

HMR:mm

247897

Frank E. Chase
1520 Goldfield Avenue
Carson City NV 89701
(702)883-1826

April 6, 1993

The Honorable Harry Reid
324 Hart Building
United States Senate
Washington, DC 20510

Ref: FCC: NPRM-PR Docket 92-235

Dear Senator Reid:

Thank you for responding to my letter and for forwarding to me the information put together by the FCC.

The information from the FCC dealing specifically with "Radio Control in the 72-76 MHZ Band" discloses serious divergence in philosophy between the RC Modeling community and the FCC.

The FCC is concerned with COMMUNICATION - voice and/or data. RC Modelers are concerned with CONTROL.

Occasional loss or garbling of communications is seldom serious. The message can be repeated or pieced together using the ungarbled portions.

Loss of control, even momentarily, on the other hand, means a mindless missile weighing up to fifty pounds hurtling at speeds up to 100 miles per hour into spectators, other pilots and/or private property.

The FCC has grossly underestimated the likelihood of serious interference to RC operation. The discussion below refers to the numbers on the FCC document attached to this letter.

1. They say our transmitters operate at .75 watts output power versus the proposed one watt output power of the commercial mobile users.

This is not true. Our transmitters operate at .25 watts. Why? Because with this output power we maintain a solid control link to our aircraft to and

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beyond the limit of visibility. Higher output power would only increase the possibility of interference with other users and increase the cost of the already expensive transmitter.

2. They say we must accept interference from fixed and mobile users and not cause interference to such users.

Note, they are thinking in terms of COMMUNICATION not CONTROL. We cannot accept interference from other users and continue to control our aircraft. That is why we are so concerned with their proposed changes.

3. Changing channel spacing from 20 KHZ to 5 KHZ will result in interference with our existing channels. It places a mobile transmitter on each side, spaced only 2.5 KHZ away from our existing channels. The permitted frequency tolerance on the mobile transmitters is 3.6 KHZ which will allow them to operate directly on top of our channels.

4. Yes, we are "peacefully" - but more importantly, safely sharing the spectrum in this band - because of the existing 20 KHZ spacing.

5. Note the communications mindset. Paraphrased, they say, "We can't guarantee no problems and, besides, all types of other users operate without conflict." That's fine for COMMUNICATIONS not for CONTROL.

How can they say that "interference will be rare" when they propose permitting transmitters having four times the output power of ours to operate on the identical frequencies they assigned us in 1988?

6. This entire paragraph is a gross distortion of the truth. They know our transmitters have only $\frac{1}{2}$ watt output. We cannot "share a channel" due to the permitted tolerance of 3.6 KHZ.

They expect us to gamble that the distance from the "factory" transmitter to aircraft will be greater than our transmitter to aircraft. Our $\frac{1}{2}$ watt transmitter has a range of one mile. We could be five miles out in the country and still be subjected to interference!

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7. Note, they make no mention of the 3.6 KHZ tolerance they are permitting. Again, they have the communication mind set. "Occasional interference is acceptable and manageable".

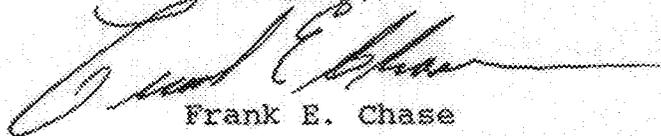
Interference, occasional or otherwise, is disastrous, dangerous and destructive!

8. The transmitters used on these channels are hand held. They could be anywhere. They have four times the output power and significantly greater range.

Model aircraft enthusiasts do try to find flying sites out in the country, but in large metropolitan areas they frequently use, with permission, large parks and school campuses within the city limits.

In conclusion, the radio frequency spectrum is like public land - it belongs to the public. Just as public land is often successfully shared between commercial users and public users for recreation, there is no reason for the FCC to ignore our concern for the safe operation of RC aircraft in order to enhance commercial exploitation of the 72 - 76 MHZ band.

Sincerely,

A handwritten signature in cursive script, appearing to read "Frank E. Chase", written in dark ink.

Frank E. Chase

Subject: Radio Control in the 72-76 MHz band

Question: What is the 72-76 MHz band used for?

Answer: The frequency range between 72-76 MHz is primarily a guard band between TV channels 4 and 5. Specifically, the channels between 72 and 76 MHz are licensed for use by 1) private and common carrier fixed station use at up to 300 watts output power (private and common carrier fixed use occurs on the same channels) and 2) private land mobile use at up to 1 watt output power. ^① The channels between 72 and 76 MHz are also available for unlicensed secondary use by remote control operators of model aircraft, boats and cars at .75 watts output power. ← ①

Question: What is the relationship between fixed and mobile land mobile operations and radio control operations?

Answer: Radio control channels are located between fixed and mobile channels. The radio control channels overlap with the fixed and mobile channels. Radio control operations are unlicensed and are secondary to fixed and mobile operations. ^② This means that radio control operations must accept interference from fixed and mobile users, and may not cause interference to such users. ← ②

Question: What changes are proposed in FR Docket 92-235 that have raised the concern of radio control operators?

Answer: We have proposed that over a 20 year period ^③ 20 kHz mobile channels in the 72-76 MHz band be replaced with 5 kHz mobile channels. (See the attached page.) Apparently, radio control operators believe that this would make many of their frequencies unusable. ← ③

Question: ^④ Private land mobile, common carrier, and radio control users have peacefully shared spectrum in this band for many years. Would these changes lead to problems between various classes of users? ← ④

Answer: ^⑤ We can not categorically state that authorized mobile operations under the current or proposed rules could never harm radio control operations. However, in practice, all types of users can and do operate without conflict, although there are rare occurrences of interference between these users. We believe that under our proposed rules they should remain rare. ← ⑤

^⑥ First, permitted power levels for both services are comparable. (For radio purposes, 3/4 of a watt is indistinguishable from 1 watt.) In approximate terms, this means that even if a factory and a radio control hobbyist shared a channel, which they would not under this proposal, the radio control user's model airplane would continue to stay under control as long as the plane is reasonably closer to the hobbyist's radio transmitter than the factory's radio transmitter. The fact that two users would not be using the exact same frequency significantly reduces risk of interference. ← ⑥